

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/931,732

DATE: 09/10/2001
TIME: 15:53:09

Input Set : A:\OASBIO0001C1.TXT
Output Set: N:\CRF3\09102001\I931732.raw

ENTERED

4 111> APPLICANT: Brown, Bob D.
5 Riley, Timothy A.
7 112> TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDES COMPRISING
8 UNIVERSAL AND/OR DEGENERATE BASES
11 113> FILE REFERENCE: CASBIO.001C1
C--> 13 140> CURRENT APPLICATION NUMBER: US/09/931,732
C--> 13 141> CURRENT FILING DATE: 2001-08-16
13 150> PRIOR APPLICATION NUMBER: PCT/US00/09293
14 151> PRIOR FILING DATE: 2000-04-07
16 150> PRIOR APPLICATION NUMBER: US 60/128,377
17 151> PRIOR FILING DATE: 1999-04-08
19 160> NUMBER OF SEQ ID NOS: 30
21 170> SOFTWARE: FastSEQ for Windows Version 4.0
23 180> SEQ ID NO: 1
24 211> LENGTH: 18
25 212> TYPE: DNA
26 213> ORGANISM: Artificial Sequence
28 220> FEATURE:
29 223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
31 221> NAME/KEY: misc_feature
32 222> LOCATION: 1-6, 13-18
33 223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
34 of specific recognition of an RNA target base
35 including, but not limited to, a, c, g, t, u,
36 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 37 7-deaza A and 7-deaza G
39 221> NAME/KEY: misc_feature
40 222> LOCATION: 7-12
41 223> OTHER INFORMATION: b = Universal or degenerate base
43 400> SEQUENCE: 1
W--> 44 hnnnnnnbbbb hnnnnnnn
46 210> SEQ ID NO: 2
47 211> LENGTH: 18
48 212> TYPE: DNA
49 213> ORGANISM: Artificial Sequence ✓
51 220> FEATURE:
52 223> OTHER INFORMATION: Synthetic oligonucleotide primers
54 221> NAME/KEY: misc_feature
55 222> LOCATION: 1-6 13-18
56 223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
57 of specific recognition of an RNA target base
58 including, but not limited to, a, c, g, t, u,
59 propynyl C, propynyl U, diaminopurine, 5-MeC, ✓
W--> 60 7-deaza A and 7-deaza G ✓
62 221> NAME/KEY: misc_feature
63 222> LOCATION: 7-12
64 223> OTHER INFORMATION: b = Universal or degenerate base

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66 >400> SEQUENCE: 2
W--> 67 nnnnnnnbbbb bnnnnnnnn 18
69 >210> SEQ ID NO: 3
70 >211> LENGTH: 18
71 >212> TYPE: DNA
72 >213> ORGANISM: Artificial Sequence
74 >214> FEATURE:
75 >223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
77 >221> NAME/KEY: misc_feature
78 >222> LOCATION: 1-6, 13-18
79 >223> OTHER INFORMATION: Natural or non-naturally occurring base capable of
80 specific recognition of an RNA target base
81 including, but not limited to, a, c, g, t, u,
82 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 83 7-deaza A and 7-deaza G
85 >221> NAME/KEY: misc_feature
86 >222> LOCATION: 7-12
87 >223> OTHER INFORMATION: b = universal or degenerate base
89 >400> SEQUENCE: 3
W--> 90 nnnnnnnbbbb bnnnnnnnn 18
92 >210> SEQ ID NO: 4
93 >211> LENGTH: 18
94 >212> TYPE: DNA
95 >213> ORGANISM: Artificial Sequence
97 >220> FEATURE:
98 >223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
100 >221> NAME/KEY: misc_feature
101 >222> LOCATION: 1-6, 13-18 c ✓
102 >223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
103 of specific recognition of an RNA target base
104 including, but not limited to, a, c, g, t, u,
105 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 106 7-deaza A and 7-deaza G
108 >221> NAME/KEY: misc_feature
109 >222> LOCATION: 7-12
110 >223> OTHER INFORMATION: b = Universal or degenerate base
112 >400> SEQUENCE: 4
W--> 113 nnnnnnnbbbb bnnnnnnnn 18
115 >210> SEQ ID NO: 5
116 >211> LENGTH: 18
117 >212> TYPE: DNA
118 >213> ORGANISM: Artificial Sequence
120 >220> FEATURE:
121 >223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
123 >221> NAME/KEY: misc_feature
124 >222> LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18
125 >223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
126 of specific recognition of an RNA target base
127 including, but not limited to, a, c, g, t, u,

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128 propynyl C, propynyl U, diaminopurine, 5-MeC.
W--> 129 7-deaza A and 7-deaza G
131 .221> NAME/KEY: misc_feature
132 .222> LOCATION: 4, 7-8, 10, 12, 14, 17
133 .223> OTHER INFORMATION: b = Universal or degenerate base
135 .400> SEQUENCE: 5
W--> 136 nnnbnnbbnb nbnbnbn 18
138 .210> SEQ ID NO: 6
139 .211> LENGTH: 18
140 .212> TYPE: DNA
141 .213> ORGANISM: Artificial Sequence ✓
143 .220> FEATURE:
144 .223> OTHER INFORMATION: Synthetic oligonucleotide primers
146 .221> NAME/KEY: misc_feature
147 .222> LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18 ✓
148 .223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
149 of specific recognition of an RNA target base
150 including, but not limited to, a, c, g, t, u,
151 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 152 7-deaza A and 7-deaza G
154 .221> NAME/KEY: misc_feature
155 .222> LOCATION: 4, 7-8, 10, 12, 14, 17
156 .223> OTHER INFORMATION: b = Universal or degenerate base
158 .400> SEQUENCE: 6
W--> 159 nnnbnnbbnb nbnbnbn 18
161 .210> SEQ ID NO: 7
162 .211> LENGTH: 18
163 .212> TYPE: DNA
164 .213> ORGANISM: Artificial Sequence ✓
166 .220> FEATURE:
167 .223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
169 .221> NAME/KEY: misc_feature
170 .222> LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18 ✓
171 .223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
172 of specific recognition of an RNA target base
173 including, but not limited to, a, c, g, t, u, ✓
174 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 175 7-deaza A and 7-deaza G
177 .221> NAME/KEY: misc_feature
178 .222> LOCATION: 4, 7-8, 10, 12, 14, 17
179 .223> OTHER INFORMATION: b = Universal or degenerate base
181 .400> SEQUENCE: 7
W--> 182 nnnbnnbbnb nbnbnbn 18
184 .210> SEQ ID NO: 8
185 .211> LENGTH: 18
186 .212> TYPE: DNA
187 .213> ORGANISM: Artificial Sequence ✓
189 .220> FEATURE:
190 .223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓

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192 . 221> NAME/KEY: misc_feature
193 . 222> LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18
194 . 223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
195 of specific recognition of an RNA target base
196 including, but not limited to, a, c, g, t, u,
197 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 198 7-deaza A and 7-deaza G
199 . 221> NAME/KEY: misc_feature
200 . 222> LOCATION: 4, 7-8, 10, 12, 14, 17
201 . 223> OTHER INFORMATION: b = Universal or degenerate base
202 . 400> SEQUENCE: 8 18
W--> 205 ~~nnnnnnnnnn~~ ~~nnnnnnnn~~
206 . 210> SEQ ID NO: 9
207 . 211> LENGTH: 18
208 . 212> TYPE: DNA
209 . 213> ORGANISM: Artificial Sequence ✓
210 . 220> FEATURE:
211 . 223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
212 . 221> NAME/KEY: misc_feature
213 . 222> LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18
214 . 223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
215 of specific recognition of an RNA target base
216 including, but not limited to, a, c, g, t, u,
217 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 221 7-deaza A and 7-deaza G
222 . 221> NAME/KEY: misc_feature
223 . 222> LOCATION: 4, 7-8, 10, 12, 14, 17
224 . 223> OTHER INFORMATION: b = Universal or degenerate base
225 . 400> SEQUENCE: 9 18
W--> 228 ~~nnnnnnnnnn~~ ~~nnnnnnnn~~
229 . 210> SEQ ID NO: 10
230 . 211> LENGTH: 18
231 . 212> TYPE: DNA
232 . 213> ORGANISM: Artificial Sequence ✓
233 . 220> FEATURE:
234 . 223> OTHER INFORMATION: Synthetic oligonucleotide primers ✓
235 . 221> NAME/KEY: misc_feature
236 . 222> LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18
237 . 223> OTHER INFORMATION: n = Natural or non-naturally occurring base capable
238 of specific recognition of an RNA target base
239 including, but not limited to, a, c, g, t, u,
240 propynyl C, propynyl U, diaminopurine, 5-MeC,
W--> 244 7-deaza A and 7-deaza G
245 . 221> NAME/KEY: misc_feature
246 . 222> LOCATION: 4, 7-8, 10, 12, 14, 17
247 . 223> OTHER INFORMATION: b = Universal or degenerate base
248 . 400> SEQUENCE: 10 18
W--> 251 ~~nnnnnnnnnn~~ ~~nnnnnnnn~~
252 . 210> SEQ ID NO: 11

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284 .111. LENGTH: 18
285 .112. TYPE: DNA
286 .113. ORGANISM: Artificial Sequence ✓
287 .114. FEATURE:
288 .115. OTHER INFORMATION: Synthetic oligonucleotide primers ✓
289 .116. NAME/KEY: misc_feature
290 .117. LOCATION: 1-3, 5-6, 9, 11, 13, 15-16, 18
291 .118. OTHER INFORMATION: n = Natural or non-naturally occurring base capable
292 of specific recognition of an RNA target base
293 including, but not limited to, a, c, g, t, u,
294 propynyl C, propynyl U, diaminopurine, 5-MeC,

```

```
W--> 267      7-deaza A and 7-deaza G
      268 - 311- NAME/KEY: misc_feature
      270 - 322- LOCATION: 4, 7-8, 10, 12, 14, 17
      271 - 323- OTHER INFORMATION: b = Universal or degenerate base
      273 - 346- SEQUENCE: 11
```

W--> 274 áóòòáóóóóóóó óóóóóóóó

18

174 210 - SEQ ID NO: 12

277 · 211 · LENGTH: 22

273 - 212 - TYPE: DNA

479 413. ORGANISM: Artificial Sequence ✓

281 . 226 . FEATURE:

282 283 OTHER INFORMATION: Synthetic oligonucleotide primers

284 - 400 - SEQUENCE: 12

285 ccaattaaa tcgactcact at

22

287 0210 SEQ ID NO: 13

283 2111 LENGTH: 80

289 · 212 · TYPE: DNA

290 - 213. ORGANISM: Artificial Sequence

292 320 • FEATURE:

293 - 223. OTHER INFORMATION: Synthetic oligonucleotide primers ✓

295 - 400 - SEQUENCE: 13

296 caggcccagc agcagcagca gcagcagcat ggtggggcgaa ttcgcgattc gaagccctat 60

86

297 actgagtcgt attaatttcg

299 - 210, SEQ ID NO: 14

300 . 211 . LENGTH: 22

301 . 212 . TYPE: DNA

302 . 213 . ORGANISM: Artificial Sequence

304 - 220 - FEATURE:

305 - 223 - OTHER INFORMATION: Synthetic oligonucleotide primers

307 - 400 - SEQUENCE: 14

308 qattctctc ctcaactggg at

22

310 - 210 - SEQ ID NC: 15

311 211 - LENGTH: 76

312 . 212 . TYPE: DNA

313 - 213 - ORGANISM: Artificial Sequence

315 - 220 - FEATURE:

315 - 323 - OTHER INFORMATION: Synthetic oligonucleotide primers

313 - 400> SEQUENCE: 15

VERIFICATION SUMMARY

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Input Set : A:\OASBIO0001C1.TXT

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L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:37 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:44 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:60 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:83 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:106 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:119 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:136 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:152 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:175 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:198 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:221 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:244 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:267 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:512 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30